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Please give a detailed statement of requirements. Describe as specifically as possi
matter to be searched. Define any terms that may have special meaning. Give exam
citations, authors, or keywords, if known.

You may include a copy of the broadest and or relevant claim(s).

Please search in CAS only, The follor
peptide:

KLLLLKLLLLKLLLLLKLLLL

Thanks,
Sue

****

STAFF USE ONLY

COMPLETED 9-20-91

SEARCHER Alex

TIME 60 TOTAL TIME

SYSTEMS
X CAS
D/
D

AN CA107(21):194788j
TI Environment-dependent conformation and antimicrobial activity of a gramicidin S analog containing leucine and lysine residues
AU Ono, Shin; Lee, Sannamu; Kodera, Yasushi; Aoyagi, Haruhiko; Waki, Michinori; Kato, Tetsuo; Izumiya, Nobuo
CS Fac. Sci., Kyushu Univ.
LO Fukuoka 812, Japan
SO FEBS Lett., 220(2), 332-6
SC 10-5 (Microbial Biochemistry)
SX 6
DT J
CO FEBLAL
IS 0014-5793
PY 1987
LA Eng
IT 113-73-5D, Gramicidin S, analogs ***110954-14-8***
(environment-dependent conformation and antimicrobial activity of)

QP501. =4
d
Microfilm.

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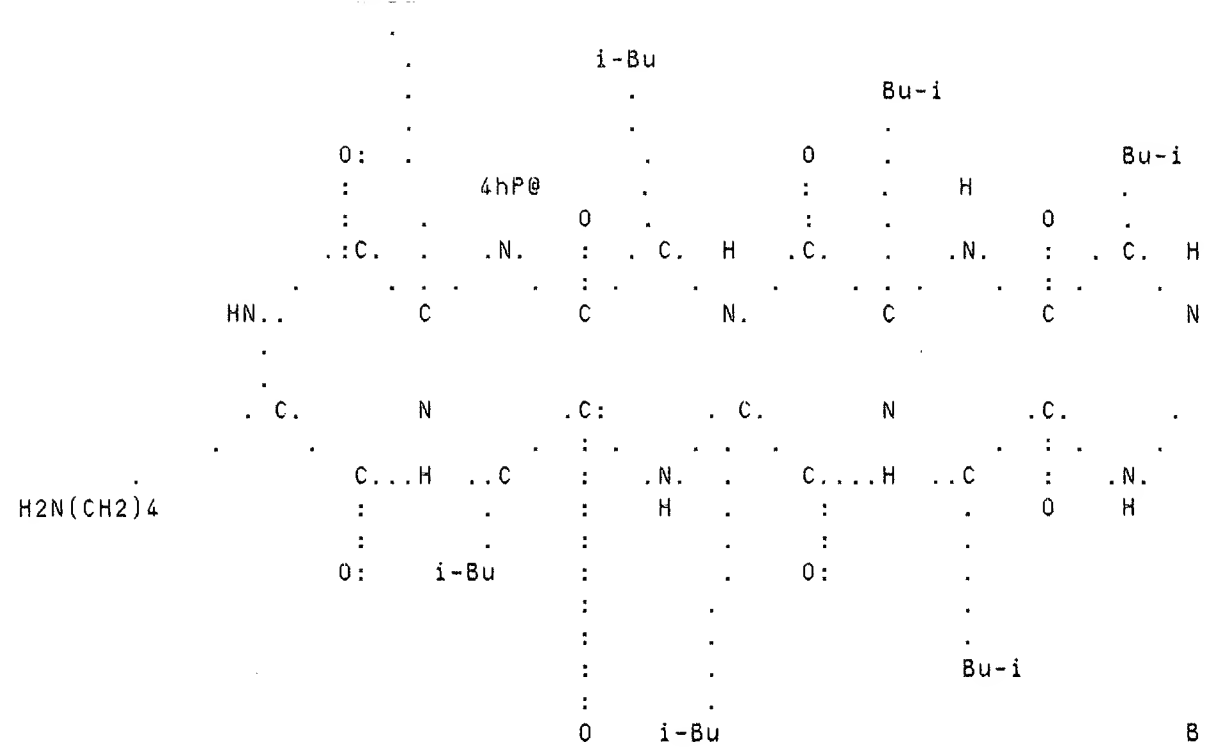
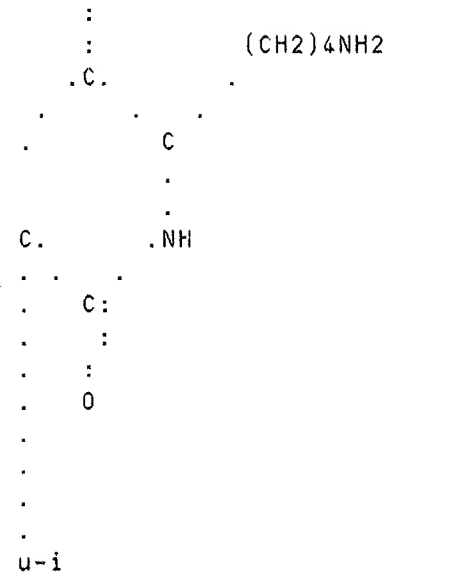
·(Leu-Lys-Leu-Leu-Leu)(Leu-Lys-Leu-Leu-Leu)



Page 1-A



Page 1-B

1 REFERENCES IN FILE CA (1967 TO DATE)

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FILE 'CA' ENTERED AT 09:56:43 ON 26 SEP 91
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FILE COVERS 1967 - 23 Sept 91 (910923/ED) VOL 115 ISS 12.
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abstract graphic structures. The AB format DOES NOT display structure
diagrams.

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L3 1 L2

=) d bib hit

L3 ANSWER 1 OF 1

Perkins
715 397

File Registry.

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            67 LLLKL/SQS
            66 LKLLL/SQS
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            66 LKLLL/SQS
           100 LLLLK/SQS
           707 LLLK/SQS
         33045 LK/SQS
L1           0 KLLLLKLLLLKLLLLKLLLLK/SQS

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=> d sqid@c

L2   ANSWER 1 OF 1
COPYRIGHT (C) 1991 AMERICAN CHEMICAL SOCIETY

RN   110954-14-8
CN   Cyclo(L-leucyl-D-leucyl-L-leucyl-L-leucyl-L-lysyl-L-leucyl-D-leucyl-
     L-leucyl-L-leucyl-L-lysyl) (9CI)  (CA INDEX NAME)
CN   1,4,7,10,13,16,19,22,25,28-Decaazacyclotriacontane, cyclic peptide
     deriv. (9CI)
FS   PROTEIN SEQUENCE
SSI  Cyclo(L-leucyl-D-leucyl-L-leucyl-L-leucyl-L-lysyl-L-leucyl-D-leucyl-
     L-leucyl-L-leucyl-L-lysyl)
SQL  10
NTE  cyclic

SEQ     1 LLLLKLLLLK
          ==========
HITS AT:  1-10
MF   C60 H112 N12 O10
SR   CA
LC   CA
STE  *
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CAS
8/92
GMP

L3 ANSWER 1 OF 6 COPYRIGHT 1992 ACS
AN CA116(7):53907w
TI Pulmonary surfactant protein B (SP-B): structure-function relationships
AU Cochrane, C. G.; Revak, S. D.
CS Dep. Immunol., Scripps Res. Inst.
LO La Jolla, CA 92037, USA
SO Science (Washington, D. C., 1883-), 254(5031), 566-8 October 1991
SC 6-3 (General Biochemistry)
SX 1, 13
DT J
CO SCIEAS
IS 0036-8075
PY 1991
LA Eng
AN CA116(7):53907w
AB SP-B is a protein in pulmonary surfactant i.e., in greatest part, responsible for resistance to surface tension and prevention of collapse of pulmonary alveoli. Peptides of 21 residues, synthesized following the sequence of SP-B or resembling the hydrophobic and hydrophilic domains of SP-B (such as RLLLLRLLLLRLLLLRLLLLR: R = Arginine; and L = Leucine, enhanced the abilities of phospholipids to reduce surface tension both in vitro and in vivo. Intermittent pos. charged residues were essential for this activity. The SP-B-like peptides were found by tryptophan fluorescence to partition within the phospholipid layer in contact with both polar head groups and acyl side chains. These data, together with findings that the SP-B-related peptides increase inter- and intramol. order of the phospholipid layer, suggest that SP-B resists surface tension by increasing lateral stability of the phospholipid layer. These peptides could serve as a material for replacement therapy in respiratory distress syndrome.

L3 ANSWER 2 OF 6 COPYRIGHT 1992 ACS
AN CA115(11):108814a
TI Raman spectroscopic studies of model human pulmonary surfactant systems: phospholipid interactions with peptide paradigms for the

surfactant protein SP-B

AU Vincent, James S.;Revak, Susan D.;Cochrane, Charles G.;Levin, Ira W.

CS Chem. Dep., Univ. Maryland

LO Cantonsville, MD 21228, USA

SO Biochemistry, 30(34), 8395-401 Aug. 1991

SC 6-3 (General Biochemistry)

DT J

CO BICHAW

IS 0006-2960

PY 1991

LA Eng

OS CJACS

AN CA115(11):108814a

AB The temp. dependence of dipalmitoylphosphatidylcholine (DPPC)/phosphatidylglycerol (PG) multilayers, reconstituted with various synthetic peptides for modeling human lung surfactant, was monitored by vibrational Raman spectroscopy. The synthetic peptides consisted, resp., of residues 59-81 of the human surfactant protein SP-B and 21 amino acid residue peptides contg. repeating units of arginine sepd. by either 4 or 8 leucines (RL4 or RL8). Each peptide demonstrated the ability to reduce significantly the surface tension of analogs of the phospholipid mixt. used in the Raman studies. Raman spectroscopic integrated band intensities and relative peak height intensity ratios, two spectral parameters used to det. bilayer disorder, provided sensitive probes for characterizing multilayer perturbations in the reconstituted liposomes. Temp. profiles derived from the various Raman intensity parameters for the 3100-2800-cm-1 C-H stretching mode region, a spectral interval representative of acyl chain vibrations, reflected lipid reorganizations due to the bilayer interactions of these peptides. For the three reconstituted multilamellar surfactant systems, the gel-to-liq.-cryst. phase-transition temps. Tm, defined by acyl chain C-H stretching mode order/disorder parameters, increased from 35.degree. in the peptide-free system to 37-38.degree., indicating increased lipid headgroup constraints for the model liposomes. Althougn the values of Tm were similar for the three recombinant lipid/peptide assemblies, individual phase-transition cooperativities varied significantly between systems and between

spectroscopically derived order/disorder parameters.

L3 ANSWER 3 OF 6 COPYRIGHT 1992 ACS
AN CA115(11):105792f
TI The use of synthetic peptides in the formation of biophysically and biologically active pulmonary surfactants
AU Revak, Susan D.;Merritt, T. Allen; Hallman, Mikko; Heldt, Gregory; La Polla, Robert J.;Hoey, Kenway; Houghten, Richard A.; Cochrane, Charles G.
CS Dep. Immunol., Res. Inst. Scripps Clin.
LO La Jolla,CA 92037, USA
SO Pediatr. Res., 29(5), 460-5
SC 1-9 (Pharmacology)
DT J
CO PEREBL
IS 0031-3998
PY 1991
LA Eng
AN CA115(11):105792f
AB Synthetic pulmonary surfactants consisting of mixts. of phospholipids with synthetic peptides based on the amino acid sequence of human surfactant apoprotein SP-B were prepd. These surfactants were analyzed for their ability to lower surface tension on a pulsating bubble surfactometer and for their capacity to improve lung compliance and increase alveolar expansion in a fetal rabbit model of surfactant deficiency. The data demonstrate that several peptides, ranging from 17 to 45 residues in length, matching the carboxy-terminal sequence of the SP-B protein, when appropriately recombined with the phospholipids dipalmitoylphosphatidylcholine and phosphatidylglycerol (3:1), are capable of producing a synthetic surfactant with biophys. and biol. activity approaching that of human surfactant derived from amniotic fluid.

L3 ANSWER 4 OF 6 COPYRIGHT 1992 ACS
AN CA113(1):556n
TI Human surfactant protein (SP) monomer and dimer, related polypeptides, and their use in prepn. of synthetic pulmonary surfactants and in treatment of respiratory distress syndrome (RDS).

AU Cochrane, Charles G.;Revak, Susan D.
CS Scripps Clinic and Research Foundation
LO USA
SO PCT Int. Appl., 89 pp.
PI WO 8906657 A1 27 Jul 1989
DS W: AU, DK, FI, JP, NO
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE
AI WO 89-US46 5 Jan 1989
PRAI US 88-141200 6 Jan 1988
US 89-293201 4 Jan 1989
IC ICM C07K007-06
ICS C07K007-08; C07K007-10; C07K013-00
SC 1-9 (Pharmacology)
DT P
CO PIXXD2
FY 1989
LA Eng
AN CA113(1):556n
GI Diagram(s) available in offline prints and/or printed CA Issue.
AB Human SP18 monomer and dimer, and synthetic peptides and proteins of 10-60 amino acid residues, are provided for use in forming a synthetic pulmonary surfactant. Also provided is a recombinant DNA mol. capable of expressing, without post-translational proteolytic processing, mature human SP18 monomer. The proteins and peptides can be used in the treatment of neonatal RDS. Thus, SP18 was isolated from human amniotic fluid and purified, and its amino acid compn. was detd. Human SP18 cDNA clones were obtained. Synthetic surfactants were prepd. from combining 1,or 1 of a variety of other synthetic peptides, with a 3:1 mixt. of dipalmitoylphosphatidylcholine and L-.alpha.-phosphatidyl-DL-glycerol. The synthetic pulmonary surfactants had greater surfactant activity than phospholipid alone, as evidenced by their ability to reduce surface tension in vitro. When Norcuron-treated fetal rabbits were instilled with the synthetic surfactants, all but 1 improved static lung compliance, as compared to lungs treated with phospholipid alone.

L3 ANSWER 5 OF 6 COPYRIGHT 1992 ACS
AN CA109(7):50369s

TI Use of human surfactant low molecular weight apoproteins in the reconstitution of surfactant biologic activity

AU Revak, Susan D.; Merritt, T. Allen; Degryse, Eric; Stefani, Lorette; Courtney, Michael; Hallman, Mikko; Cochrane, Charles G.

CS Res. Inst., Scripps Clin.

LO La Jolla, CA 92037, USA

SO J. Clin. Invest., 81(3), 826-33

SC 6-3 (General Biochemistry)

SX 3, 13

DT J

CO JCINAO

IS 0021-9738

PY 1988

LA Eng

AN CA109(7):50369s

AB Two low-mol.-wt. (LMW) apoproteins were isolated from human pulmonary surfactant. SDS-polyacrylamide gel anal. showed one protein (SP 18) to have an apparent mol. wt. of 18,000 when unreduced and 9000 daltons (D) after redn. The second protein (SP 9) migrated at .apprx.9000 D in the presence or absence of reducing agents. Both proteins contain a high no. of hydrophobic amino acids. The N-terminal sequence of SP 18 was detd. A cDNA clone isolated from a human adult lung cDNA library contained a long open reading frame encoding at an internal position the human SP 18 N-terminal sequence. Mixts. of phospholipids (PL) and SP 9 and SP 18 were assessed for their capacity to reduce surface tensions on a pulsating bubble surfactometer. The addn. of 1% apoprotein resulted in a redn. of surface tension after 15 s from 42.9 dyn/cm for PL alone to 16.7 and 6.3 dyn/cm for prepns. contg. SP 9 and SP 18, resp. In vivo assessment of reconstituted surfactant activity was performed in fetal rabbits. Reconstituted surfactant consisting of PL + 0.5% SP 18 instilled intratracheally at delivery resulted in a marked increase in lung compliance, while the incorporation of 0.5% SP 9 yielded a moderate increase. These data show the ability to produce biol. active surfactant by the addn. of isolated LMW apoproteins to defined PL.

L3 ANSWER 6 OF 6 COPYRIGHT 1992 ACS

AN CA106(17):133965x

TI Reconstitution of surfactant activity using purified human apoprotein and phospholipids measured in vitro and in vivo

AU Revak, Susan D.;Merritt, T. Allen; Hallman, Mikko; Cochrane, Charles G.

CS Dep. Immunol., Scripps Clin. Res. Found.

LO La Jolla,CA, USA

SO Am. Rev. Respir. Dis.,134(6), 1258-65

SC 6-3 (General Biochemistry)

SX 13

DT J

CO ARDSBL

IS 0003-0805

PY 1986

LA Eng

AN CA106(17):133965x

AB The major apoprotein of human lung surfactant was isolated from amniotic fluid obtained at term gestation. It was disulfide-linked oligomer composed of polypeptide chains of 35,000 daltons. The monomeric unit was glycoprotein, and treatment with peptide:N-glycosidase F resulted in a decrease in mol. wt. to 31,000 daltons. The isolated apoprotein could be recombined in the presence of Ca2 with the phospholipids dipalmitoylphosphatidylcholin e and phosphatidylglycerol (3:1) at a wt. ratio of 1:100. The surface tension (.gamma. min.) measured on a pulsating bubble formed in 4 mg/mL phospholipids was reduced from 32.3 to 18.0 dyn cm-1 after 15 s when 1% apoprotein was present. Redn. of disulfide bonds and deglycosylation of the apoprotein did not alter its ability to lower .gamma. min. Fetal rabbits of 27 days gestation had instilled intratracheally at delivery, saline, phospholipids, phospholipids, phospholipids plus apoprotein, or natural human surfactant. The latter two resulted in increased lung compliance and striking improvement in homogeneous alveolar expansion when the lungs were expanded to 10 cm H2O pressure, fixed, and viewed histol. This effect was also independent of the disulfide-dependent oligomeric structure of the apoprotein or its state of glycosylation. The surfactant produced by recombination of the phospholipids with the isolated apoprotein was, therefore, biophys. active both in vitro and in vivo. Apoprotein can apparently be recombined with phospholipids to produce a biol. active surfactant for use in clin.